JOURNAL OF AGRICULTURAL RESEARCH

VOL. XXVI WASHINGTON, D. C., OCTOBER 6–DECEMBER 29, 1923

CONTENTS

	Page
Action of Sodium Nitrite in the Soil. R. H. ROBINSON	1
Effect of Autoclaving upon the Toxicity of Cottonseed Meal. C. T. DOWELL and PAUL MENAUL	9
The Auxotaxic Curve as a Means of Classifying Soils and Studying their Colloidal Properties. A. E. VINSON and C. N. CATLIN (4 text figures)	11
Some Observations on the Temperature of the Leaves of Crop Plants. EDWIN C. MILLER and A. R. SAUNDERS (8 text figures)	15
A New Tumor of the Apricot. AMRAM KHAZANOFF (13 plates)	45
Notes on the Biology of the Cadelle, *Tenebroides mauritanicus* Linné. RICHARD T. COTTON	61
Chemical Examination of "Chufa," the Tubers of *Cyperus esculentus* Linné. FREDERICK B. POWER AND VICTOR K. CHESNUT	69
The Constituents of "Chufa" Oil, a Fatty Oil from the Tubers of *Cyperus esculentus* Linné. WALTER F. BAUGHMAN and GEORGE S. JAMIESON	77
Soil Reaction in Relation to Calcium Adsorption. C. O. SWANSON (7 text figures)	83
Time for Testing Mother Beets. DEAN A. PACK	125
A Bacterial Stripe Disease of Proso Millet. CHARLOTTE ELLIOTT (4 plates)	151
Factors Which Determine Otocephaly in Guinea Pigs. SEWALL WRIGHT and ORSON N. EATON (3 text figures; 1 plate)	161
A Method of Automatic Control of Low Temperatures Employed by the United States Department of Agriculture. JOHN T. BOWEN (4 text figures)	183
Excretions from Leaves as a Factor in Arsenical Injury to Plants. C. M. SMITH	191
Influence of Soil Temperature and Moisture on Infection of Wheat Seedlings by *Helminthosporium sativum*. H. H. MCKINNEY (6 text figures; 4 plates)	195
Five Molds and Their Penetration into Wood. ELOISE GERRY (4 plates)	219
Common Earthenware Jars a Source of Error in Pot Experiments. J. S. MCHARGUE (1 plate)	231
The Physiological Effect of Gossypol. PAUL MENAUL	233
Iron Content of the Blood and Spleen in Infectious Equine Anemia. LEWIS H. WRIGHT	239
Further Observations on the Osmotic Pressure of the Juices of the Potato Plant. B. F. LUTMAN	243
A Method for the Quantitative Estimation of Tannin in Plant Tissue. PAUL MENAUL	257
A Chemical Analysis of *Jatropha stimulosa*. PAUL MENAUL	259
Varietal Resistance in Winter Wheat to the Rosette Disease. R. W. WEBB, C. E. LEIGHTY, G. H. DUNGAN, and J. B. KENDRICK	261
Two Diseases of Udo (*Aralia cordata* Thunb.). J. L. WEIMER (4 plates)	271
Biological Notes on the Termites of the Canal Zone and Adjoining Parts of the Republic of Panama. HARRY FREDERIC DIETZ and THOMAS ELLIOTT SNYDER (8 plates)	279
The Absorption of Carbon by the Roots of Plants. J. F. BREAZEALE	303
Oak Sapling Borer, *Goes tesselatus* Haldeman. FRED E. BROOKS (3 plates)	313
Bud Selection as Related to Quantity Production in the Washington Navel Orange. A. D. SHAMEL, C. S. POMEROY, and R. E. CARYL (2 plates)	319
Compounds Developed in Rancid Fats, with Observations on the Mechanism of Their Formation. WILMER C. POWICK (2 text figures)	323
Some Physiological Variations in Strains of *Rhizopus nigricans*. L. L. HARTER and J. L. WEIMER	363
Preparation and Properties of Colloidal Arsenate of Lead. F. J. BRINLEY	373
Active Chlorin as a Germicide for Milk and Milk Products. HARRISON HALE and WILLIAM L. BLEECKER (1 text figure; 3 plates)	375

71600—25

	Page
The Quantitative Determination of Carotin by Means of the Spectrophotometer and the Colorimeter. F. M. SCHERTZ (5 text figures)	383
Our Only Common North American Chigger, Its Distribution and Nomenclature. H. E. EWING	401
Habits of the Cotton Rootrot Fungus. C. J. KING (4 text figures; 7 plates)	405
The Three-banded Grape Leafhopper and Other Leafhoppers Injuring Grapes. G. A. RUNNER and C. I. BLISS (2 plates)	419
Some Morphological Responses of the Host Tissue to the Crowngall Organism. A. J. RIKER (6 plates)	425
The Minimum Milk Requirement for Calf Raising. A. C. RAGSDALE and C. W. TURNER (1 text figure)	437
The Red Stain in the Wood of Boxelder. ERNEST E. HUBERT (2 text figures; 3 plates)	447
Stem and Rootrot of Peas in the United States Caused by Species of Fusarium. FRED REUEL JONES (1 text figure; 1 plate)	459
Hornworm Septicemia. G. F. WHITE (2 text figures; 1 plate)	477
Cutworm Septicemia. G. F. WHITE (2 text figures; 2 plates)	487
A Study of the Serology, the Cerebrospinal Fluid and the Pathological Changes in the Spinal Cord in Dourine. HARRY W. SCHOENING and ROBERT J. FORMAD (4 text figures)	497
A Budrot of the Peach Caused by a Species of Fusarium. JOHN W. ROBERTS (1 text figure; 1 plate)	507
Oiled Wrappers, Oils and Waxes in the Control of Apple Scald. CHARLES BROOKS, J. S. COOLEY, and D. F. FISHER	513
Influence of Temperature and Initial Weight of Seeds upon the Growth-Rate of *Phaseolus vulgaris* Seedlings. WILLEM RUDOLFS (2 text figures)	537
Some Factors Which Influence the Feathering of Cream in Coffee. L. H. BURGWALD	541
Biology of the False Wireworm, *Eleodes suturalis* Say. J. S. WADE and R. A. St. GEORGE (4 text figures; 2 plates)	547
The Eggplant Leaf-Miner, *Phthorimaea glochinella* Zellar. THOMAS H. JONES (1 plate)	567
Cytological Studies of Infection of Baart, Kanred and Mindum Wheats by *Puccinia graminis tritici* Forms III and XIX. RUTH F. ALLEN (7 plates)	571
The Intracellular Bodies Associated with the Rosette Disease and a Mosaiclike Leaf Mottling of Wheat. HAROLD H. MCKINNEY, SOPHIA H. ECKERSON, and ROBERT W. WEBB (8 plates)	605
Notes on the Biology of the Four-Spotted Bean Weevil, *Bruchus quadrimaculatus* Fab. A. O. LARSON and PEREZ SIMMONS (1 text figure)	609

ERRATA AND AUTHORS' EMENDATIONS

Page 54, line 9, should read "callus," instead of "callous."
Page 58, line 21, should read "while Y illustrates" instead of "while Z illustrates."
Page 68, line 1, should read "Cyperaceae" instead of "Cyperaecae."
Page 150, line 29, should read "quantity of sugar lost" instead of "quality of sugar lost."
Page 165, lines 7–8, should read "figure 2" instead of "figure 1."
Page 169, line 2, should read "with butyric acid" instead of "on butyric acid."
Page 175, Table VIII, head, should read "*among the normal sibs of the otocephali in the same and in other litters*" instead of "*among the litter mates of the otocephali*."
Page 265, Table II, should have ".....do".....| Ind. Sta.....| BWG" instead under line 13 beginning "Turkey....." Line 14 should read "Minnesota.....| ....do.....| BWG" instead of Minnesota .....| Ind. Sta.....| BWG."
Page 316, line 42, should read "*Castanea dentata*" instead of *Castania dentata*."
Plate 7, facing page 418, paragraph "C.—" should be "D.—" Paragraph "D.—" should be "C.—."
Page 424, line 22, should read "potash fish-oil soap" instead of "potash, fish-oil soap."
Page 554, lines 28–29, should read "(Pl. 2, C, E)" instead of "(Pl. 2, D, F)."
Page 554, line 17 from bottom, should read "clepshydral-shaped" instead of clepsydra-shaped."
Page 555, line 10 from bottom, should read "five spinelike setae" instead of "fine spinelike setae."
Page 557, running head, should read "*suturalis*" instead of *Suturalis*."
Page 576, center head should read "Effect on Nuclei and Plastids of Baart" instead of "Effect of Neuclei and Plastids of Baart."
Page 577, lines 21–23 should read "material" instead of "maetrial." Line 45 should read "(Table I, *A*, plastids", instead of "(Table I, plastids)."
Page 579, line 16, should read "forms I and XIX" instead of "forms I and XXI."
Page 593, Table V, FORM III, line 1, should read "Baart".....| 4.....| March / August / October

instead of "Baart".....| 4.....| October."
Page 599, line 2, should read "Urediniospores" instead of "Unrediniospores."
Page 604, line 17, should read "traumataxis" instead of "traumotaxis."
Plate 5, facing page 604, line 19, should read "The second, *c*, in an" instead of "The second, *c*, is an." Line 15, add "—146o."
Plate 5, facing page 608, legend, line 2, shou'd read "Plate 4" instead of "Plates 4." Line 3 should read "X" instead of "XIIII." Line 4 should read "pseudopodialike" instead of "pseudopodia like."
Page 613, Table II, line 16, column 4, should read "(a)" instead of "(1)".